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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,283	01/26/2004	Leonard R. Clark JR.	CLA241	6475
7590	01/27/2005		EXAMINER	
Michael de Angeli 60 Intrepid Lane Jamestown, RI 02835			ELDRD, JOHN W	
			ART UNIT	PAPER NUMBER
			3644	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/763,283	CLARK, JR. ET AL
	<b>Examiner</b>	<b>Art Unit</b>
	J. Woodrow Eldred	3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>05132004</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 7, 8, 11, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7, “bullet- or capsule-shaped” is both alternative and indefinite. It is not clear what shape is being claimed since both bullets and capsules have a variety of shapes.

In claim 8, “canted … with respect to a central longitudinal axis” is unclear as to which direction the fins are tilted, e.g. tilted to be non-aligned in the parallel sense, or tilted away from the axis.

In claim 11, “the pinion gear” and “the rotor drive gear” have no antecedent basis in the claims. In addition, it is not clear how the claimed gears are structurally possible since the base claim has the rotor head fixed to the output shaft of the motor.

In claim 13, it is unclear as to how the claimed gearbox is structurally possible since the base claim has the rotor head fixed to the output shaft of the motor.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5-7, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rehkemper et al (6,758,436) in view of Arlton et al (5,879,131).

Rehkemper et al discloses an vertical take off and landing aircraft comprising most of the claimed elements, including a compressed air motor 34 with a drive shaft 36, a rotor head 60 coupled to the drive shaft, a pivoting rotor hub 56,52, a rotor with a pair of blades and stabilizer bars, a landing gear, a fuselage with the rotor mounted on a first end of it and the landing gear mounted on a second end, and a remote control. See especially Figures 2 and 6, and column 4, lines 22-30. Rehkemper et al fail to disclose the airfoil blades as being pivotal about two more perpendicular axes near the rotor hub as claimed. Arlton et al teach that it is known to have the airfoil blades of a helicopter pivot about two perpendicular axes near the rotor hub and to have the second axis defined by a double clevis connector. See especially Figure 4 and column 8, lines 10-18. Motivation to combine is Arlton et al's teaching that these two pivoting hinges allows the rotor blades to be less strongly and lighter built than would otherwise be the case. To employ the teachings of Arlton et al on the aircraft of Rehkemper et al and have the rotor blades with the claimed two pivoting axes is considered to have been obvious to one having ordinary skill in the art.

5. Claims 8, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rehkemper et al (6,758,436) in view of Arlton et al (5,879,131) as applied to claims 1-3, 5-7, 12, and 14 above, and further in view of Ingram (2002/0074452).

Rehkemper et al fail to disclose the elongated body having fins elongated along the body or to have counter-rotating rotors. Ingram teaches that it is known to employ both elongated fins upon an elongated fuselage and to have counter-rotating rotors. See especially Figure 1 and elements 19, 28, and 29. Motivation to combine includes improved performance from greater control provided by additional airfoils such as the fins and the reduction of torque on the aircraft by providing a second rotor that neutralizes the torque of the first rotor. To employ the teachings of Ingram and Arlton et al on the aircraft of Rehkemper et al and have fins and counter-rotating rotors is considered to have been obvious to one having ordinary skill in the art.

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6. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rehkemper et al (6,758,436) in view of Arlton et al (5,879,131) as applied to claims 1-3, 5-7, 12, and 14 above, and further in view of Dixon (5,634,839).

Rehkemper et al fail to disclose the motor and power source of the aircraft as being an electric motor with rechargeable batteries. Dixon teaches that it is known to employ an electric motor and rechargeable batteries as the motor and power source of a vertical take-off aircraft in which the motor speed is remote controlled. See especially Figure 1; column 4, lines 43-48; and column 4, line 66-column 5, line6. Motivation to combine is the mere substitution of known aircraft motors and power sources to perform the same basic functions. To employ the teachings of Dixon and Arlton et al on the aircraft of Rehkemper et al and have an electric motor and rechargeable batteries is considered to have been obvious to one having ordinary skill in the art.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rehkemper et al (6,758,436) in view of Arlton et al (5,879,131) as applied to claims 1-3, 5-7, 12, and 14 above, and further in view of Del Campo Aguilera (5,289,994).

Rehkemper et al fail to disclose a rotating landing gear. Del Campo Aguilera teaches that it is known to employ a rotating wheel as the landing gear. See especially Figure 1, elements 5 and 7; and column 4, lines 53-68. Motivation to combine is the mere substitution of known aircraft landing gear to perform the same basic function with the additional functionality of being able to roll. To employ the teachings of Del Campo Aguilera and Arlton et al on the aircraft of Rehkemper et al and a rotating landing gear is considered to have been obvious to one having ordinary skill in the art.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Woodrow Eldred whose telephone number is 703-306-4151. The examiner can normally be reached on Monday to Thursday, from 8:00 a.m. to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 703-305-7421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. Woodrow Eldred  
Primary Examiner  
Art Unit 3644

JWE